

Remarks

The above Amendments and these Remarks are in reply to the Office Action mailed August 27, 2007.

I. Summary of Examiner's Objections/Rejections

The Specification was objected to as requiring that "Not Applicable" be placed in section (h), Brief Description of the Drawings.

The Drawing previously submitted in the response of June 11, 2007 was objected to.

Claims 11-21 were pending in the Application prior to the Office Action mailed August 27, 2007. In the Office Action, the Examiner rejected claims 11-21.

Claims 13, 15, and 19 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

Claims 11-21 were rejected under 35 U.S.C. 102(b) as being anticipated by Bogle et al. (U.S. Pat. No. 6,353,923 B1).

II. Summary of Applicants' Response

The claims were amended to better define embodiments of Applicants' invention, amending claims 11, 13, 15, and 19, leaving for the Examiner's present consideration claims 11-21. A drawing was canceled and the specification was amended in response to the Examiner's objections, but no new matter is added.

III. Related Application 10/784,600 Was Allowed

Applicants bring to the attention of the Examiner that the related application 10/784,600 was

allowed. The Examiner's statement of reasons for allowance in application 10/784,600 stated, "Bogle and other cited prior art, taken alone or in combination failed to disclose limitations as cited..."

IV. The Prior Art Reference Does Not Anticipate or Suggest Claims 11-21

Claims 11, 13, 15, and 19 were amended to better define embodiments of Applicants' invention.

Objections to the Drawings and the Specification

A drawing was canceled and the specification was amended in response to the Examiner's objections, but no new matter is added.

35 U.S.C. 112 Rejection to Claim 13

Claim 13 (as amended) states: "The system of claim 11, wherein the debugger uses a JAVA™ Debugging Interface ~~(JDI)~~."

Applicants submit that Claim 13 satisfied the requirements of 35 U.S.C. 112 before it was amended, and that Claim 13 (as amended) even more fully satisfies the requirements of 35 U.S.C. 112.

35 U.S.C. 112 Rejection to Claim 15

Claim 15 (as amended) states: "The system of claim 11, further comprising: a proxy, wherein the proxy is used between the executing code being debugged and the debugger[;].” Claim 15 was amended to correct an inadvertent punctuation error.

35 U.S.C. 112 Rejection to Claim 19

Claim 19 (as amended) states: “The system of claim 18, wherein the runtime messaging environment interprets language interactions and performs debugging using a ~~in~~ JAVA™ Platform Debugging Architecture (JPDA).”

Applicants submit that Claim 19 satisfied the requirements of 35 U.S.C. 112 before it was amended, and that Claim 19 (as amended) even more fully satisfies the requirements of 35 U.S.C. 112.

35 U.S.C. 102 Rejection to Independent Claim 11

Independent Claim 11 states:

A system for debugging in more than one programming language, comprising:

a multi-language debugger with the capability to debug a source code file which contains with multiple[,] nested, ~~compiled and interpreted~~ languages, wherein the multi-language debugger interprets multiple languages that are nested in a single source file, and wherein the multiple nested languages can include both compiled and interpreted languages;

a script debug controller, wherein the multi-language debugger uses a standardized interface for a script engine ~~interface~~, wherein all communications with the [a] script engine ~~communicates with the debugger~~ will be through calls to the script debug controller ~~engine interface~~;

a debuggable frame object, wherein the script engine uses a debuggable frame object to retrieve script context for a supported language, wherein each of the multiple nested languages is displayed in a debuggable frame object, and wherein each of the multiple nested languages can be edited in the debuggable frame object;

an interface to a messaging environment, wherein the interface is implemented by a runtime messaging environment that controls a running state of the script engine; and
a debug commands interface; ~~and~~
~~a script debug controller.~~

Bogle teaches an active debugging environment for debugging a virtual application that contains program language code from multiple compiled and interpreted languages. Bogle's focus is on debugging a virtual application that has components from several programming languages. Bogle's invention does not appear to be intended to address the same problem that Applicants faced, namely debugging a single source code file with multiple interpreted and compiled languages nested within one another. While there are some similarities in the solutions developed by Bogle and Applicants, the fact that they had different problems to solve resulted in different inventions.

The Office Action's reliance on Bogle as anticipating Claim 11 is clearly erroneous. The person skilled in the art recognizes a distinction between Bogle's system for debugging a virtual application that contains program code in several source code files versus Claim 11's system for debugging a single source code file that contain multiple nested languages.

Claim 11 (as amended) requires "a multi-language debugger with the capability to debug a source code file which contains with multiple[,] nested, compiled and interpreted languages, wherein the multi-language debugger interprets multiple languages that are nested in a single source file, and wherein the multiple nested languages can include both compiled and interpreted languages." The Office Action cited Bogle's FIG. 4 and the statement in col. 4, lines 10 – 19, for disclosing for this portion of Claim 11. The Office Action's reliance on this portion of Bogle is clearly erroneous. FIG. 4 shows multiple host processes and the debug managers, FIG. 4 does not indicate the

capability to debug multiple nested languages in a single source code file. Bogle's col. 4, lines 10 – 19, describes a method for debugging a virtual application that includes multiple compiled and interpreted programming language statements. However, col. 4 says nothing regarding an ability to debug multiple nested languages in a single source code file. There is a distinction between debugging a virtual application that contains program code in several source code files versus debugging a single source code file that contains multiple nested languages. The person skilled in the art sees the distinction between the teachings of Bogle and the requirements of Claim 11.

Claim 11 (as amended) further requires “a script debug controller, wherein the multi-language debugger uses a standardized interface for a script engine interface, wherein all communications with the [a] script engine communicates with the debugger will be through calls to the script debug controller engine interface.” The Office Action cited Bogle's FIG. 3 #301 and #304 and FIG. 4 for disclosing this portion of Claim 11. While FIG. 3 does contain a Scripting Language Engine and FIG. 4 shows a Script Host that communicates with multiple Language Engines, FIG. 3 and FIG. 4 do not disclose the requirements of this portion of Claim 11.

Claim 11 (as amended) further requires “a debuggable frame object, wherein the script engine uses a debuggable frame object to retrieve script context for a supported language, wherein each of the multiple nested languages is displayed in a debuggable frame object, and wherein each of the multiple nested languages can be edited in the debuggable frame object.” The Office Action cited Bogle's FIG. 4, #422 and #423 for disclosing a debuggable frame object and FIG. 4 and associated text for disclosing the remainder of the features of this portion of Claim 11. Bogle's #422 and #423 are Language Engines. Bogle describes “a language engine 422-423 supports a specific language implementation and provides specific language features used by the corresponding program language code in the virtual application. Among the specific language features are the

breakpoint, start, stop, and jump debug implementations, expression evaluations, syntax coloring, object browsing, and stack frame enumeration. Each language specific feature is unique to a programming language regardless of the quantity of that programming language that exists in the virtual application.” Bogle’s language engines and associated text does not disclose the requirements of this portion of Claim 11.

Applicants respectfully submit that the embodiment as defined in Independent Claim 11 is neither anticipated by nor obvious in view of Bogle.

35 U.S.C. 102 Rejection to Claim 21

Claim 21 states:

The system of claim 20, wherein the script debug controller receives information from the script engine, comprising:

- a) language extensions for each language;
- b) classes that implement the script engine;
- c) information on optional capabilities for each language; and
- d) language name.

The Office Action stated that the “reference can do this claim, see entire reference.” The Office Action failed to make a prima facie rejection to Claim 21. The Office Action failed to disclose where Bogle teaches a script debug controller receiving the above information from the script engine.

35 U.S.C. 102 Rejections to Claims 12-21

For at least the reasons discussed above, dependent Claims 12-21 are also patentable. Dependent claims 12-21 add their own limitations which render them patentable in their own right.

V. Conclusion

In light of the above, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and a Notice of Allowance is requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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